

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of	)	
	)	
Connect America Fund	)	WC Docket No. 10-90
	)	
ETC Annual Reports and Certifications	)	WC Docket No. 14-58
	)	

**REPLY COMMENTS OF  
HUGHES NETWORK SYSTEMS, LLC**

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To: The Commission

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Hughes Network Systems LLC (“Hughes”) hereby replies to oppositions and filed in this proceeding in response to its Petition for Reconsideration,<sup>1</sup> which asks the Commission to rectify bidding inequities in the FCC’s Order and Order on Reconsideration<sup>2</sup> and establish bid weights that enable satellite broadband providers such as Hughes to compete meaningfully in the Connect America Fund (“CAF”) Phase II reverse auction.

**I. INTRODUCTION AND SUMMARY**

As now-Chairman Pai succinctly explained, the Commission’s goal in CAF Phase II is “to maximize the broadband bang we get for our universal service buck by establishing a flexible weighting system that should incentivize carriers to deploy faster service to rural America at the lowest possible price to the taxpayer.”<sup>3</sup> CAF Phase II therefore relies upon a competitive

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<sup>1</sup> Petition for Reconsideration of Hughes Network Systems, LLC, WC Docket Nos. 10-90 & 14-58 (filed Apr. 20, 2017) (“Petition”).

<sup>2</sup> *Connect America Fund; ETC Annual Reports and Certifications*, Report and Order and Order on Reconsideration, 32 FCC Rcd 1624 (“Order”).

<sup>3</sup> *Connect America Fund; ETC Annual Reports and Certifications*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 5949, 6109-10 (Statement of Commissioner Ajit Pai, Approving in Part and Concurring in Part); *accord. id.* at 5957 (2016), *citing Connect America Fund, et al.*, 26 FCC Rcd 17663, 17732 ¶ 179, 18086 ¶ 1195 (2011) (“*USF/ICC Transformation Order*”), *aff’d sub nom.*, *In re FCC 11-61*, 753 F.3d 1015 (10th Cir. 2014).

bidding process to select the most efficient provider to serve each area.<sup>4</sup> Where the deployment of terrestrial broadband services cannot be completed on an economic or timely basis (such as, for example, due to lengthy permitting processes, construction delays, limited consumer demand, challenging terrain, or geographical isolation), satellite broadband emerges as an easily deployable, cost-effective solution to digitally integrating even the most remote and underpopulated parts of the United States. Further, the data reveal that satellite customers experience comparable levels of satisfaction to their terrestrial broadband counterparts.<sup>5</sup> Indeed, one satellite company reports that over one-third of its current customer base is comprised of terrestrial broadband defectors.<sup>6</sup> The record clearly reflects that satellite broadband providers are an important part of the broadband marketplace and an important part of reaching unserved and underserved communities.

Yet, the current CAF Phase II bidding matrix would prevent a satellite provider from winning a bid in an area where it is the most efficient provider by unjustly penalizing it for not providing speeds that are unavailable to most Americans at minimum latency.<sup>7</sup> The Order's

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<sup>4</sup> The National Broadband Plan proposed, and the *USF/ICC Transformation Order* adopted, an approach of allowing the market to help identify the provider that will serve the area at the lowest cost. *USF/ICC Transformation Order*, 26 FCC Rcd at 17732 ¶ 179.

<sup>5</sup> Letter from L. Charles Keller, Attorney for Hughes Network Systems, Inc. to Marlene H. Dortch, Secretary, FCC, WC Docket No. 10-90 (filed May. 11, 2016) (“Hughes Ex Parte May 11, 2016”) (“Market research shows that satellite broadband customers are in the middle of the pack among all broadband customers in satisfaction levels. Data from Consumer Reports demonstrates that recent broadband consumer satisfaction surveys put ViaSat/WildBlue at or above the level of cable broadband and DSL.”); Comments of ViaSat, Inc., WC Docket Nos. 10-90, 14-58, 14-259, at 5-6 (filed July 21, 2016) (“ViaSat CAF Comments”) (“ViaSat’s satellite broadband service ... now has an overall user satisfaction rating that is on par with that of leading cable-based broadband service providers”).

<sup>6</sup> See ViaSat CAF Comments at 6.

<sup>7</sup> Under the Order, bids receive a 20% credit for 25/3, a 40% credit for 100/20, and a 60% credit for Gigabit service, while high-latency bids receive an additional 25% penalty. Hughes proposes in its Petition that the Commission adopt a matrix by which bids receive a 10% credit for 25/3, a

weighting not only fails to reflect actual consumer preferences, it punishes satellite broadband providers for not providing the highest speeds that are geographically and financially out-of-reach for most Americans. As one Commissioner opined, the Commission’s speed benchmarks are “detach[ed] from reality,” exposing “[the Commission’s] intention to use the benchmarks for political and regulatory purposes.”<sup>8</sup> At the very least, the Order’s bidding matrix reflects arbitrary and “at the last moment” decisions<sup>9</sup> that are not in step with the data on actual consumer preferences: a far cry from the kind of apolitical, data-driven policymaking that was to be the touchstone of this chairmanship.<sup>10</sup>

The CAF Phase II resources are precious and finite: as more taxpayer dollars are dissipated to subsidize premium terrestrial broadband services, CAF Phase II will inevitably serve fewer customers. Strategic investments in greater satellite capacity,<sup>11</sup> rising

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20% credit for 100/3, and a 25% credit for Gigabit service, while high-latency bids receive an additional 10% penalty.

<sup>8</sup> Commissioner Michael O’Rielly, “Federal Broadband Infrastructure Spending: Potential Pitfalls” at 1, FCC Blog (Feb. 1, 2017) (“O’Rielly Blog Post”), <https://www.fcc.gov/news-events/blog/2017/02/01/federal-broadband-infrastructure-spending-potential-pitfalls>.

<sup>9</sup> Order at 1668, Statement of Commissioner Michael O’Rielly (approving in part and dissenting in part) (“O’Rielly Partial Dissent”).

<sup>10</sup> See, e.g., Remarks of FCC Chairman Ajit Pai, “The First 100 Days: Bringing the Benefits of the Digital Age to All Americans” at 5, American Enterprise Institute, Washington, D.C. (May 5, 2017), [https://apps.fcc.gov/edocs\\_public/attachmatch/DOC-344733A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/DOC-344733A1.pdf).

<sup>11</sup> Its Hughes XIX, the world’s highest throughput satellite, entered into commercial service on March 16, 2017, making Hughes the first and only U.S. satellite Internet service to offer FCC-defined broadband speeds across the continental United States. With a speed capacity of over 150 Gbps and over 130 Gbps forward capacity, Hughes XIX currently provides broadband-defined speeds of 25/3 Mbps for residential users and 55/5 Mbps for enterprise users from coast-to-coast. See *HughesNet Gen5 High-Speed Satellite Internet Service Now Available via GSA Schedule*, Yahoo! Finance (Mar. 30, 2017) (“HughesNet Satellite Internet Service”), <http://finance.yahoo.com/news/hughesnet-gen5-high-speed-satellite-130000395.html>. See also Andrew Burger, *HughesNet Claims First FCC Broadband Defined 25 Mbps Satellite Broadband Service*, Telecompetitor (Mar. 7, 2017), <http://www.telecompetitor.com/hughesnet-claims-first-fcc-broadband-defined-25-mbps-satellite-broadband-service/> (Jupiter 3, a next-generation satellite slated to launch at the end of the decade, which will provide even greater capacity and higher speeds to its U.S. satellite broadband consumers).

upload/download speeds, broadening coverage across the continental United States, and advancements in network engineering have made satellite broadband internet an excellent, competitive offering for its over 1.6 million U.S. residential broadband customers. Coupled with unrivaled coverage across the continental United States, less costly infrastructure requirements, and fewer regulatory barriers to deployment than terrestrial broadband, satellite broadband services are the key to digitally integrating the most inaccessible and underserved parts of the country, and they should not be structurally foreclosed from participating in the reverse auction.

The filings in response to Hughes's Petition in no way refute these points, nor do they undermine Hughes's argument that, unless the bidding matrix is revised, the CAF Phase II auction will be denied the benefits of satellite participation. The joint comments of a group of electric utilities ("Power Companies") in particular are a blatant effort to preserve their advantage in the existing matrix by essentially arguing that, unless satellite broadband providers' costs are a small fraction of the cost of fiber, satellite always should lose. In fact, as satellite broadband providers consistently have argued in this proceeding, they are often the most efficient option *in the areas where terrestrial costs are highest*. The bidding matrix must not prevent them from serving this role in the auction, and therefore must be changed.

## **II. THE RECORD SHOWS THAT TOP-HEAVY BID WEIGHTS WOULD UNDERMINE THE COMMISSION'S STATUTORY UNIVERSAL SERVICE MANDATE**

### **A. The Record Does Not Refute Satellite's Role as the More Efficient Provider in Very High Cost Areas**

As Hughes has previously stated, "[m]aximizing bidder participation, regardless of any bidder's technology, engenders robust competition and helps ensure that unserved or underserved areas are served by the most efficient providers."<sup>12</sup> At this stage, the debate is about

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<sup>12</sup> Petition at 12.

*what degree of preference* the Commission will assign to higher-speed, lower-latency terrestrial technologies in the reverse auction, and whether that preference will box satellite broadband providers out of their natural market in areas where terrestrial costs are highest. Even under Hughes's proposed weighting matrix, satellite providers' bids at 25/3 Mbps will receive a total weighting of 25 points, placing them at a significant disadvantage compared to low-latency fiber bids in the Gigabit tier that will have no negative latency weighting attached. The Order, by contrast, would impose an insurmountable disadvantage upon satellite providers of a whopping 65 points, in a system with an effective 100-point scale.

Rural consumers and American taxpayers lose when competitors are structurally foreclosed from competing in the reverse auction, and Hughes believes that market forces should be allowed to play a greater role in allocating bids. Without question, satellite broadband should only win in the reverse auction if it is more cost-effective than terrestrial technologies. While the Power Companies attempt to paint Hughes's candor as to some of the financial realities associated with deploying its services as walking back "earlier claims, indications, and assumptions in the record about the purported benefits" of satellite service,<sup>13</sup> i.e., that "satellite broadband service can be provided at a lower cost than terrestrial broadband services,"<sup>14</sup> Hughes has never asserted, however, that it is *always* the lowest-cost provider. Rather, Hughes has consistently argued that satellite broadband's strength is that it can provide more cost effective and timely service *in the areas that are most expensive to serve with terrestrial facilities*.

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<sup>13</sup> Comments of Association of Missouri Electric Cooperatives, Midwest Energy Cooperative, HomeWorks Tri-County Electric Cooperative, Alger Delta Cooperative Electric Association, Great Lakes Energy, NTCA—The Rural Broadband Association, the Utilities Technology Council, and the National Rural Electric Cooperative Association, WC Docket Nos. 10-90 & 14-58, at 5 (filed May 18, 2017). Notably, the Power Companies are not as forthcoming with any data about the relative cost of their terrestrial services.

<sup>14</sup> *Id.* at 7.

If the Power Companies believe that they are lower-cost than satellite technologies, as their comments suggest, then they should not need any weighting – let alone the extreme weighting provided in the Order – in order to win an auction. Even more significantly, if the Power Companies are right that satellite’s support needs will exceed the available subsidy, then satellite providers will be shut out of the bidding altogether. The Power Companies will not even need a 25-point advantage in order to win.

Ultimately, the Power Companies’ arguments suffer from the same fallacy as the Order itself: it assumes that satellite providers are only worthy of competing within the reverse auction if their costs are astronomically below the reserve price. However, the reality is that the cost of buying down the capacity needed to meet CAF requirements will limit satellite providers’ bids to the highest-cost areas.

The Commission chose an auction mechanism for CAF Phase II in order to select the most efficient technology to serve each rural and high-cost area. The National Broadband Plan proposed, and the *USF/ICC Transformation Order* adopted, an objective to allow the market to help identify the provider that will serve the area at the lowest cost.<sup>15</sup> This can only be achieved if all broadband providers are given a meaningful opportunity to compete. The current weighting scheme will not achieve this goal. The Commission should give satellite broadband providers the opportunity to compete fairly and win support in very high-cost areas where they may demonstrate that they are the most efficient provider, rather than subjecting them to an overwhelming disadvantage that no broadband technology ever could overcome.

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<sup>15</sup> *USF/ICC Transformation Order*, 26 FCC Rcd at 17732 ¶ 179.



## **B. Reasonably Comparable Service Should Receive the Greatest Weight**

As WISPA points out, the bid weights in the Order give too much of an advantage to speeds that are higher than what most American consumers actually buy.<sup>16</sup> According to the 2016 Broadband Progress Report, 25 Mbps download and 3 Mbps upload is “the highest speed adopted by a majority of fixed broadband subscribers,”<sup>17</sup> while over twenty-three million Americans, comprising thirty-nine percent of the rural population, lack even access to 25/3 Mbps fixed broadband.<sup>18</sup> The Commission’s weighting system, thus, should prioritize bringing those unserved and underserved populations “reasonably comparable service” to that enjoyed by most Americans in urban areas, consistent with the Commission’s statutory mandate.<sup>19</sup> Instead, the current system awards significant weighting advantage to even higher-speed bids associated with premium broadband services. These higher speeds are not available to most Americans and subscribed to by few. As one Commissioner observed: “ultra-fast residential service is a novelty and good for marketing, but the tiny percentage of people using it cannot drive our policy decisions.”<sup>20</sup>

The practical result of this weighting is that the Order “favor[s] the highest speed tiers at the expense of more people getting broadband.” American Cable Association’s (“ACA”) counterargument that the top-heavy structure would actually prevent rural consumers from being

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<sup>16</sup> Comments of WISPA, WC Docket Nos. 10-90 & 14-58, at 2-3 (filed May 18, 2017) (“WISPA Comments”).

<sup>17</sup> *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, 2016 Broadband Progress Report, 31 FCC Rcd 699, 746-47 ¶ 108 (2016) (“2016 Broadband Progress Report”).

<sup>18</sup> *Id.*

<sup>19</sup> See 47 U.S.C. § 254(b)(3) (“[C]onsumers in rural and high-cost areas [should] have access to services ‘that are reasonably comparable to those services provided in urban areas.’”).

<sup>20</sup> O’Rielly Blog Post at 1.

“deprived” of “the high-speed, lower-latency services that are common in urban areas” is unconvincing. “Because it is more expensive to deploy broadband networks with faster speeds, it follows that bidders for the Gigabit and Above Baseline Tiers will require higher subsidy amounts,” WISPA explains, “the winning bid amounts will [therefore] be higher, resulting in fewer unserved locations being subsidized.”<sup>21</sup> Moreover, in the view of Commissioner O’Rielly: “focusing on artificial speeds diverts attention and resources from establishing service to those lacking any broadband service. The outcry for things like ultra-high speed service in certain areas means longer waits for those who have no access or still rely on dialup service, as providers rush to serve the denser and more profitable areas that seek upgrades to this level.”<sup>22</sup> It is egregious that precious tax dollars should go to subsidize “luxury” services for the few at levels that are either unavailable or, where available, financially undesirable for most Americans, while millions remain stranded on the other side of the digital divide. The FCC should thus modify its weighting matrix in order to better achieve its statutory objective to make “reasonably comparable” services accessible to the most Americans.

### **C. Satellite Service Is Also Quicker to Market**

Despite the current matrix’s apparent favoritism for fiber, “[d]ragging fiber to the top of every mountain may not make any sense in terms of cost, time to build, safety of installers and long term survivability against the surrounding elements” one Commissioner observed.<sup>23</sup> Where obstacles such as lengthy permitting processes, construction delays, limited consumer demand, or geographical isolation stand in the way of the deployment of terrestrial broadband providers,<sup>24</sup>

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<sup>21</sup> WISPA Comments at 2-3.

<sup>22</sup> O’Rielly Blog Post at 1.

<sup>23</sup> *Id.*

<sup>24</sup> See, e.g., *Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies, Acceleration of Broadband Deployment: Expanding the Reach and Reducing the Cost*

none of these affect satellite services. Years can pass while fiber providers seek excavation permits, hire dig crews, and obtain FCC and local approvals, the Hughes Jupiter XIX satellite, since it entered service this spring, has been able to deliver upwards of 25/3 Mbps residential speeds from coast-to-coast.<sup>25</sup> Hughes, the Commission, and the participants in this proceeding recognize that the needs of rural and underserved communities are urgent. Reducing the speed and latency penalties per Hughes's Petition also will help account for satellite broadband systems' more expedited deployment capabilities.

### **III. THE RECORD DOES NOT SUPPORT THE LATENCY PENALTY**

None of the comments have demonstrated that the degree of latency experienced by satellite broadband negatively impacts consumers' satisfaction or ability to access the services they need to benefit from digital inclusion. As Hughes has discussed here and in its Petition, satellite broadband customers are just as satisfied as the customers of other types of broadband providers,<sup>26</sup> notwithstanding the inevitable latency resulting from the data travel time to and from a geostationary satellite.<sup>27</sup> ACA's assertion that services such as SMS, IM, web-browsing, and cloud storage are latency-sensitive is laughable and flatly-contradicted by the Commission's

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*of Broadband Deployment by Improving Policies Regarding Public Rights of Way and Wireless Facilities Siting, Amendment of Parts 1 and 17 of the Commission's Rules Regarding Public Notice Procedures for Processing Antenna Structure Registration Applications for Certain Temporary Towers, 2012 Biennial Review of Telecommunications Regulations, Notice of Proposed Rulemaking, 28 FCC Rcd 14238, 14240 ¶ 3 (2013).*

<sup>25</sup> See HughesNet Satellite Internet Service, *supra* note 11.

<sup>26</sup> Hughes Ex Parte May 11, 2016 ("Market research shows that satellite broadband customers are in the middle of the pack among all broadband customers in satisfaction levels. Data from Consumer Reports demonstrates that recent broadband consumer satisfaction surveys put ViaSat/WildBlue at or above the level of cable broadband and DSL."); ViaSat CAF Comments at 5-6 ("ViaSat's satellite broadband service ... now has an overall user satisfaction rating that is on par with that of leading cable-based broadband service providers").

<sup>27</sup> See 2016 Broadband Progress Report, 31 FCC Rcd 699, 720 n.162; FCC, *2015 Measuring Broadband in America: A Report on Consumer Fixed Broadband Performance in the United States*, at 17 (2015) ("2015 Measuring Broadband Report"), <http://data.fcc.gov/download-/measuring-broadband-america/2015/2015-Fixed-Measuring-Broadband-America-Report.pdf>.

own evidence. The 2015 Measuring Broadband Report concludes that “less interactive applications such as web browsing and video streaming” are “unlikely” to be affected by such “differences in average latencies.”<sup>28</sup> Video streaming alone already accounts for more than 60 percent of peak downstream traffic over fixed broadband facilities in North America,<sup>29</sup> and that number is projected to keep rising.<sup>30</sup>

For the reasons discussed in Section I.A., above, the record demonstrates that satellite services are one of the most cost-effective means of connecting unserved and underserved communities and any excessive latency penalty also would unfairly limit satellite broadband providers’ ability to serve the most remote and inaccessible areas. Thus, in light of the comments submitted in response to this Petition, Hughes does not believe that the need for any latency penalty has been persuasively established.

#### **IV. CORRECTING THE BIDDING MATRIX WOULD NOT DELAY THE AUCTION**

Lastly, there is no basis for ACA’s contention that correcting the weighting matrix would cause “delay.”<sup>31</sup> Hughes shares ACA’s frustration with the slow pace in proceeding with the CAF auction. ACA does not offer any reason, however, why correcting the bid matrix now would change the auction timeline. Indeed, the statistics that ACA cites about the urgent need

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<sup>28</sup> See 2015 Measuring Broadband Report at 7.

<sup>29</sup> See *id.* at n.3.

<sup>30</sup> Cisco, Cisco Visual Networking Index: Forecast and Methodology 2015-2020 at 14, White Paper (June 1, 2016), <http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/complete-white-paper-c11-481360.pdf>. Accord. *Connect America Fund; ETC Annual Reports and Certifications Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. § 160(c) from Obsolete ILEC Regulatory Obligations that Inhibit Deployment of Next-Generation Networks*, Report and Order, 29 FCC Rcd 15644, 15653 at ¶ 23 (2014) (“We expect carriers planning upgrades to their networks today would take into account near term and future consumer demand.”).

<sup>31</sup> Comments of the American Cable Association, WC Docket Nos. 10-90 & 14-58, at 3-6 (filed May 18, 2017).

for support in rural areas emphasizes Hughes's point that the weighting matrix needs to be right to avoid leaving many Americans without service.

## V. CONCLUSION

Based upon the foregoing, Hughes respectfully requests that the Commission grant its Petition and decrease the latency penalty to no more than 10% and adopt a bid weighting system that provides a maximum of a 10% credit for 25/3 service, a 20% credit for 100/20 service, and a 25% credit for Gigabit service. This would ensure greater consistency with the principles of competitive and technological neutrality, stimulate participation by satellite broadband providers, and lead to more efficient auction outcomes.

Respectfully submitted,

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